

### Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the present application.

1. (currently amended) A method of modifying cell structure comprising: introducing into a mammalian cell either biliverdin reductase or a ~~fragment or variant thereof~~, or a nucleic acid molecule encoding biliverdin reductase or a ~~fragment or variant thereof~~ under conditions effective to express biliverdin reductase or the ~~fragment or variant thereof~~, thereby increasing the intracellular concentration of biliverdin reductase, or the ~~fragment or variant thereof~~, and modifying the structure of the mammalian cell,

wherein the biliverdin reductase is encoded by a nucleic acid molecule that hybridizes to the complement of SEQ ID NO: 2 under hybridization conditions comprising a temperature of 65°C and a hybridization medium comprising 1 M Na<sup>+</sup> buffer and remains hybridized following wash conditions comprising a temperature of 65°C and a wash medium comprising 0.2X SSC buffer, and

wherein the modified cell structure is enhanced cell size, actin microspike formation, polar cell morphology, or a combination thereof.

2. (canceled)

3. (withdrawn) The method according claim 1 wherein biliverdin reductase is introduced into the mammalian cell.

4-7 (canceled)

8. (previously presented) The method according to claim 1 wherein a nucleic acid molecule encoding biliverdin reductase is introduced into the mammalian cell.

9. (previously presented) The method according to claim 8 wherein said introducing comprises:

transfecting the mammalian cell with an infective transformation vector comprising the nucleic acid encoding biliverdin reductase.

10. (original) The method according to claim 9 wherein the infective transformation vector is an adenovirus vector or a retrovirus vector.

11 (original) The method according to claim 1 wherein the mammalian cell is a stem cell, a neuronal or glial cell, a vascular smooth muscle cell, a skeletal muscle cell, an epithelial cell, or a nucleated blood cell.

12. (original) The method according to claim 1 wherein the mammalian cell is *in vitro*.

13-26 (canceled)